

Board Game Tournament Management System

Objective

The goal of this project is to design and develop a relational database system to manage board game tournaments. This system will allow organizers to register players, schedule matches, track results, and manage scores for various board games like chess, Settlers of Catan, Ticket to Ride, or any other popular tabletop games. The system will also support team-based games, track individual or team performance, and generate rankings.

Scope of the Project

The system will manage different types of board games, player registrations, tournament schedules, match results, and final rankings. It will support both single-player and team-based tournaments. Users can use this system to create tournaments, register participants, and follow the progress through different rounds of play.

Key Features

Login and User Authentication

- Allow players and organizers to register in and login.

Player Registration

- Create player profiles with details such as name, contact info, and preferred board games.

- Track players' tournament history and ranking.

- Option to register as an individual or as part of a team.

Game Management

- Manage a catalog of board games with their respective rules, number of players, and game types (single-player or team-based).

- Include games like chess, Catan, Monopoly, or custom games that fit the organizer's needs.

- Allow organizers to specify the rules for each tournament (e.g., best-of-three rounds).

Tournament Setup

- Organizers can create a new tournament, choose the type of board game, set the number of players/teams, and define match rules (e.g., elimination rounds, Swiss system, or league format).

- Schedule matches and automatically advance players to the next round based on results.

- Support both individual and team-based tournaments.

Match Scheduling

- Automatically generate match pairings based on the number of participants or teams.

- Include details like match date, time, and location (if applicable).

- Track the progression of each round and update the schedule accordingly.

Allow players to view upcoming matches, report results, or challenge others.

Score and Result Tracking

Input match results, including scores, win/loss status, or tie scenarios.

Automatically update player rankings based on match outcomes.

Generate leaderboards for each tournament, showing top-performing players or teams.

Team Management

Allow players to form teams for team-based games.

Track team members, their individual performance, and the overall team's ranking.

Support substitution of players in team matches if needed.

Ranking and Awards

Calculate player or team rankings based on match performance, wins, and scores.

Generate awards and recognition for top players, teams, or categories (e.g., "Best Chess Player" or "Most Wins in Catan").

Display final rankings and optionally assign trophies or badges to winners.

Remark

The database model should enable all these features. Yet, the front-end (web part) is only required for "Login and User Authentication", "Player Registration", "Tournament Setup", "Score and Result Tracking", "Ranking and Awards".

Doing more than this minimum will increase your grade through bonus points.

Required general functionalities

As a pedagogical exercise, the design and implementation of this project should demonstrate your ability to design a database and interact with it. To this end, you will have to ensure that the following minimal requirements are met:

- Add, edit, delete data
- Look for data
- Filter data according to relevant criteria
- Show relevant statistics from data, generate reports
- Implement a user interface allowing manipulation of the different features (forms)
- Allow multi-user (registration, connection)
- Properly design the database, respect the 3NF

The overall quality of the project and the richness of features will also be appreciated, so you are highly encouraged to go further and make a project of quality.